

BMW Group

February 18, 2003

Ref: FW0103

Marlene H. Dorte
Commission's Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: Revision of the Commission's Rules to
Ensure compatibility With Enhanced
911 Emergency Calling Systems
Further Notice of Proposed Rulemaking
CC Docket No. 94-102**

This letter provides comments on behalf of the BMW Group (BMW) to the Further Notice of Proposed Rulemaking concerning revision of the Commission's Rules to ensure compatibility with enhanced 911 (E911) emergency calling systems.

Background

BMW of North America, LLC, provides telematics services branded as "BMW Assist" as both as standard and optional equipment on its BMW models. The telematics services consist of location-based emergency services, including Automatic Collision Notification (ACN), and Roadside Assistance. The BMW Assist system functions by combining an on-board GPS system and commercial wireless service. The wireless service may be provided by an embedded transceiver or, in earlier generation systems, through a portable handset.

An end user has several options in which to trigger the system; an SOS "hot button" located in the overhead console area on most vehicles, a roadside assistance (non emergency) button located in the overhead console area (available on some models), a menu driven user interface (available on some models), and an automatic call triggered by the airbag deployment sensors. Activation of the system's "hot button" generally triggers a call to the contracted telematics service provider, or dispatch service, operated by ATX Technologies in Irving, TX. Once triggered, the call sequence is fully automated by an electronic control unit (ECU) and typically consists of a data portion followed by a voice portion. The data segment usually consists of transmitting vehicle-specific data to the call center such as vehicle latitude and longitude, vehicle identification number (VIN) and calling party's number. The vehicle's transmitted location is automatically correlated to the street, nearest cross street, city, county and state using the telematics service

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provider's map database and reverse geo-coding algorithms. Using a proprietary Public Safety Answering Point (PSAP) database, the vehicle's location is also correlated to the nearest PSAP location and phone number. Once the data transfer is complete, the telematics service provider's response specialist establishes verbal communications to the occupants of the vehicle as the data is simultaneously displayed to the response specialist. If emergency response is needed, then a second response specialist calls the appropriate PSAP to communicate the situation while the initial response specialist stays on the line with the vehicle occupants. If needed and/or requested, the PSAP representative can be connected the caller. The call is terminated by the telematics service provider only after applicable service has been rendered. If the telematics call fails in the event of an Ineffective Attempt or Lost Call, the ECU follows an engineered call flow sequence to reestablish communications with the telematics service provider. The call flow sequence is specifically designed to utilize digital and analog wireless services in the event that one or the other signal is sufficiently available.

The FCC should not attempt to regulate Telematic Providers

BMW Assist telematics service surpasses the FCC's objective of providing location based emergency service by providing a ubiquitous location based dispatch service to subscribers.¹ The system uses dead reckoning, map matching and GPS technology that is typically capable of providing the users location to within 11 yards. In this regard, telematics systems generally outperform the accuracy requirements of E911². Attempts by the FCC to regulate these proven commercial systems could potentially cause more harm than good, given the delayed nationwide rollout of E-911 Phase II location capability due to the disparate and varying accuracy of network solutions as well as slow local PSAP upgrade to process the data. Conversely, telematics provides a uniform national solution capable of exceptional location services to BMW Assist subscribers. Furthermore, the telematics call center can provide accurate location information to any PSAP, alleviating the problem of inconsistent E911 Phase II deployment across carriers and PSAPs as shown in the Hatfield Report³. Additionally, it should also be acknowledged that given the network call routing of 911 calls today, based upon cell tower location, rather than handset location, it is possible for callers to be routed to a PSAP that does not have jurisdiction in the caller's location.

Telematics service providers offer advantages to the PSAPs

Telematics service providers act as a so-called dispatch service. This service provides a valuable screening capacity to the PSAPs. Of all calls in 2002 to the BMW Assist telematics service provider, only 2% needed to be and were actually connected to PSAPs. In the event of a non-emergency call, the telematics call center filters this call from a PSAP. Thus, it is shown that the telematics service centers significantly reduce the potential call volume load on this public infrastructure. Furthermore, in the event of a national or local emergency, the telematics call center may serve as an adjunct to the capacity of the PSAPs.

The FCC should take into consideration the following lifecycle and development factors in a potential policy change with respect to Enhanced 911 emergency calling systems;

1. Vehicle OEM product development cycle vs. consumer product development cycle. It can be shown that the automotive product development cycle is typically on the order of four to six years from concept to consumer availability. This presents a sharp contrast to the relatively short design cycle of the consumer product-based wireless handset. As a result, vehicle OEMs should not be treated with the same regulation as handset manufacturers and service providers.
2. Vehicle OEM product lifecycle vs. consumer product lifecycle. Again it can be shown that the automotive product life is approximately ten times longer than the consumer product lifecycle. This large disparity presents additional challenges to the vehicle OEM because the wireless carrier and consumer handset technology will complete multiple product cycles in the span of a single automotive model lifecycle. Again, it is shown that the vehicle OEM's should not be treated in regulation designed for the product lifespan of a wireless handset.

Telematics users should be presented clear information on how the system works

BMW recognizes the importance to clearly demonstrate and provide documentation to the end user regarding the operation of his/her telematics system. It is important for the telematics industry to educate consumers between the difference of a PSAP and a telematics call center or dispatch service. For example, during the vehicle delivery process an acquaintance call is made to introduce the customer to a live operator at the BMW Assist response center. At this time, the operation of the system is explained and demonstrated. Also, it is clearly communicated to the customer, in marketing and contractual literature, that the primary method of response is through the dispatch service and that the user does not directly reach a PSAP.

Non-Initialized System

In the event that a BMW Assist system is not activated with an embedded transceiver and BMW-contracted wireless service, there are two possible scenarios as follows.

1. If an end user declines service at the point of sale a process is triggered to deactivate the telematics service. The telematics ECU will be internally switched off through a software mechanism. Additionally, a transaction to the underlying CMRS provider will take place to deactivate the transceiver account from the CMRS providers billing system. The end-user will initiate and consent to this process in the form of a decline of service waiver. A

vehicle equipped in this state will offer no telematics safety services to the end user.

2. If an end user fails to renew a BMW Assist subscription, the non-renewal will prompt a transaction to the underlying commercial mobile radio service (CMRS) provider to deactivate the transceiver account from the CMRS providers billing system. In this state, a vehicle so equipped, may still possess the capability to make fully functioning telematics calls because in this configuration the CMRS provider is contracted to complete the telematics call without respect to a call validation process.

Benefits to the End User

The end user benefit is primarily that of increased safety and improved emergency response. Generally, the telematics response center will have access to end user personal data, presented to the call center operator in real time. The call center operator can utilize the end user data to better provide emergency response and personal assistance. For this reason, a telematics service provider is better prepared to handle telematics calls.

The FCC has no basis for jurisdiction over ACN calls

ACN calls are treated with the highest priority by the telematics call center. The FCC should not require directing these calls to the PSAP for the following reasons; The BMW Assist response specialists are trained via APCO and in-house courses to interpret the transmitted and stored data in order to respond correctly to the situation of an airbag deploy. The proper response to an end user involved in such an airbag deploy situation may not be the direct expertise of a PSAP operator, e.g., responding appropriately if the occupants are unconscious. Additionally, since the FCC does not have jurisdiction over local PSAPs it would be impossible to establish a ubiquitous network of PSAPs capable of providing a comparable service to that of the dispatch center with respect to ACN calls.

A Telematics Device is not a telephone

The FCC does not have jurisdiction over telematics equipment suppliers based on the Act to Regulate Telecommunications Equipment Manufacturers.⁴ As shown above, telematics devices are not equivalent to wireless handsets and should not be identified as Customer Premise Equipment.

Conclusion

In modifying its current regulations, the FCC must carefully weigh the potential impact to vehicle OEM telematic providers. Further, modification to 47 CFR 20.18 should clearly differentiate telematics providers from CMRS providers. Any requirements to telematics providers should be synchronized to automotive industry standards and developed jointly by the vehicle OEMs. Finally, the commission should recognize that a telematics systems' ability to provide an alternative method of location information to a dispatch center as a technically equivalent solution to E911 Phase II.

Sincerely,



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- 1) 47 CFR 20.18 (k)
- 2) 47 CFR 20.18(h)
- 3) See "A Report on Technical and Operational Issues Impacting The Provision of Wireless Enhanced 911 Services" Prepared for the FCC by Dale N Hatfield, Telecommunications Consultant
- 4) 47 U.S.C 151 (a) 47 U.S.C. 154 (i) see e.g. CFR part 68